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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/645,035	08/21/2003	Michael E. Ring	CRD 01482	7356
JAMES RAY & ASSOCIATES 2640 Pitcairn Road Monroeville, PA 15146			EXAMINER	
			BURCH, MELODY M	
			ART UNIT	PAPER NUMBER
			3683	
			DATE MAIL ED: 10/30/2006	

Please find below and/or attached an Office communication concerning this application or proceeding.

<del>_</del>	<del></del>	Application No.	Applicant(s)			
Office Action Summary		10/645,035	RING ET AL.			
		Examiner	Art Unit			
	•	Melody M. Burch	3683			
	The MAILING DATE of this communication appears on the cover sheet with the correspondence address Period for Reply					
WHIC - Exter after - If NO - Failu Any r	ORTENED STATUTORY PERIOD FOR REPLY CHEVER IS LONGER, FROM THE MAILING DANSIONS of time may be available under the provisions of 37 CFR 1.13 SIX (6) MONTHS from the mailing date of this communication. Period for reply is specified above, the maximum statutory period were to reply within the set or extended period for reply will, by statute, reply received by the Office later than three months after the mailing and patent term adjustment. See 37 CFR 1.704(b).	ATE OF THIS COMMUNICATION 36(a). In no event, however, may a reply be time will apply and will expire SIX (6) MONTHS from cause the application to become ABANDONE	the mailing date of this communication.  D (35 U.S.C. § 133).			
Status						
2a)⊠	Responsive to communication(s) filed on <u>14 Au</u> This action is <b>FINAL</b> . 2b) This Since this application is in condition for allowant closed in accordance with the practice under <i>E</i>	action is non-final.  nce except for formal matters, pro-				
Dispositi	on of Claims					
<ul> <li>4) Claim(s) 1-21 is/are pending in the application.</li> <li>4a) Of the above claim(s) is/are withdrawn from consideration.</li> <li>5) Claim(s) is/are allowed.</li> <li>6) Claim(s) 1-9 and 11-21 is/are rejected.</li> <li>7) Claim(s) 10 is/are objected to.</li> <li>8) Claim(s) are subject to restriction and/or election requirement.</li> </ul>						
Application Papers						
10) 🖾	The specification is objected to by the Examiner The drawing(s) filed on 8/14/06 is/are: a) according and applicant may not request that any objection to the Replacement drawing sheet(s) including the correction to the oath or declaration is objected to by the Example 2.	cepted or b) objected to by the drawing(s) be held in abeyance. See on is required if the drawing(s) is obj	e 37 CFR 1.85(a). jected to. See 37 CFR 1.121(d).			
Priority u	inder 35 U.S.C. § 119	•				
12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  a) All b) Some color None of:  1. Certified copies of the priority documents have been received.  2. Certified copies of the priority documents have been received in Application No.  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.						
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2)	e of References Cited (PTO-892) e of Draftsperson's Patent Drawing Review (PTO-948) nation Disclosure Statement(s) (PTO/SB/08) No(s)/Mail Date	4) Interview Summary Paper No(s)/Mail Da 5) Notice of Informal P 6) Other:	ate			

#### **DETAILED ACTION**

## **Drawings**

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the push rod and shield recited in claim 10 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered. Examiner notes that a shield 60 is shown, but no push rod is shown as described in the specification and as claimed.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### Claim Objections

- 2. Claims 9-13 and 16-18 are objected to because of the following informalities: the term "forth" in line 13 from the bottom should be changed to --fourth--. Appropriate correction is required. The remaining claims are objected to due to their dependency from claim 9.
- 3. Claims 6-8 are objected to because of the following informalities: the phrase "foreign when" in the second to last line of subparagraph (a) in claim 6 should be reworded. Appropriate correction is required. The remaining claims are objected to due to their dependency from claim 6.

#### Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
- 5. Claims 1, 2, 5, 6, 9, 11, 12, 13, and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 4711464 to Bilas.

Re: claim 1. Bilas shows in figure 1 an actuating member capable of being used for a railway vehicle brake assembly, such vehicle brake assembly having an air bag actuator 10 incorporated therein, said actuating member comprising: a first substantially vertically disposed plate like member or right side of element 14, said first substantially vertically disposed plate like having a first substantially planar surface

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shown near the lead line of 14 engageable with a first surface of a second substantially vertically disposed plate like member or right side wall 11 attached to such air bag actuator, a substantially horizontally disposed plate like member 22 connected to the first substantially vertically disposed plate like member adjacent a bottom edge thereof and extending substantially perpendicular to the first planar surface of the first vertically disposed plate member for shielding at least a first portion (or particularly the bottom portion) of the air bag actuator from foreign material as shown, and a means 15 connected to a radially opposed second surface of the first vertically disposed plate like member via intervening elements such as element 13 for securing the actuating member to a control linkage of the assembly.

Re: claim 2. Bilas shows in figure 1 wherein the actuating member further includes a first plate like member left side of element 14 connected to an upper surface of the substantially horizontally disposed member via intervening elements and to the first planar surface of the first substantially vertically disposed plate like member adjacent a first side edge thereof and extending substantially perpendicularly to at least the substantially horizontally disposed member for shielding at least a second portion (or top left portion) of such air bag actuator from the detrimental extraneous foreign material and for providing added strength between the first substantially vertically disposed member and the substantially horizontally disposed member.

Re: claim 5. Bilas shows in figure 1 the means including at least one plate member 16 having an aperture formed therethrough and a pin member 15 disposed in the aperture for securing the at least one plate member to such control linkage.

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Re: claim 6. Bilas shows in figure 1 an apparatus for mounting an air bag actuator to at least one brake beam, the air bag actuator having at least one inflatable air bag spring 19, the apparatus comprising: a first substantially vertically disposed plate like member or right side of element 14 having a planar surface portion for engagement with a substantially planar surface portion of a second substantially vertically disposed plate like member or right side of element 11 connected to such air bag actuator, the first substantially vertically disposed plate like member exposing at least a first portion of an exterior surface of such at least one inflatable air bag spring to an atmospheric operating environment by way of its cooperation with element 14 which has an aperture communicating with aperture 17 exposed to atmosphere characterized by a presence of detrimental extraneous foreign when such car mounted brake assembly is in use, a guide means 13 directly connected to and disposed closely adjacent a first outer edge of and substantially perpendicular to the planar surface portion of the first substantially vertically disposed plate like member for guiding and alignment during reciprocal motion of such air bag actuator and a securing means 15 connected to the first substantially vertically disposed plate like member via intervening element such as element 13 for enabling attachment of the apparatus to a rigid structure.

Re: claim 9. Bilas shows in figure 1 an air spring actuator assembly, the air spring actuator assembly comprising: at least one air bag spring 19 having at least a first portion of an exterior surface exposed to an atmospheric operating environment via apertures 17 and 18 characterized by a presence of detrimental extraneous foreign material during use of the air spring actuator assembly, a first substantially vertically

disposed plate like member or right side of element 14, the first substantially vertically disposed plate like member having a first substantially planar surface engageable with a first surface of a second substantially vertically disposed plate like member or right side of element 11 attached to the at last one air bag spring, a substantially horizontally disposed plate like member 22 connected to the first substantially vertically disposed plate like member adjacent a bottom edge thereof and extending substantially perpendicular to the first substantially planar surface of the first substantially vertically disposed plate like member for shielding the at least said first portion of the exterior surface of the at least one air bag spring from the detrimental extraneous foreign material, a means 15 connected via intervening elements to a radially opposed second surface of the first substantially vertically disposed plate like member for securing the first substantially vertically disposed plate like member to a control linkage of a railway vehicle brake assembly, a third substantially vertically disposed plate like member or left side of element 14 having a second planar surface portion for engagement with a substantially planar surface portion of a fourth substantially vertically disposed plate like member or right side of element 11 connected to the at least one air bag spring, a guide means 13 connected to and disposed closely adjacent a first outer edge of and substantially perpendicular to at least one of the first substantially planar surface and the second planar surface portion of a respective one of the first and the third substantially vertically disposed plate like member for guiding and alignment during reciprocal motion of the air bag spring and a securing means connected to the third

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substantially vertically disposed plate like member for enabling attachment of the air spring actuator assembly to a rigid structure.

Re: claims 11 and 12. Bilas shows in figure 1 the means for limiting reciprocal motion being in the form of element 26 (or element 24 with respect to claim 12).

Re: claims 13 and 18. See the air inlet at element 18. The means for controlling volume of air includes element 21.

6. Claims 1-9 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 2879077 to Chalmers.

Re: claim 1. Chalmers shows in figure 1 an actuating member capable of being used for a railway vehicle brake assembly, such vehicle brake assembly having an air bag actuator shown in the area of element 12 incorporated therein, said actuating member comprising: a first substantially vertically disposed plate like member 10, said first substantially vertically disposed plate like having a first substantially planar surface engageable with a first surface of a second substantially vertically disposed plate like member 14 attached to such air bag actuator, a substantially horizontally disposed plate like member 50 connected to the first substantially vertically disposed plate like member adjacent a bottom edge thereof and extending substantially perpendicular to the first planar surface of the first vertically disposed plate member for shielding at least a first portion of the air bag actuator from foreign material as shown, and a means or aperture within element 10 (in an alternate interpretation see element 36) connected to a radially opposed second surface of the

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first vertically disposed plate like member for securing the actuating member to a control linkage 32 or 52 in another interpretation of the assembly.

Re: claim 2. Chalmers shows in figure 1 wherein the actuating member further includes a first plate like member left side of element one of element 16 or 18 connected to an upper surface of the substantially horizontally disposed member via intervening elements and to the first planar surface of the first substantially vertically disposed plate like member adjacent a first side edge thereof and extending substantially perpendicularly to at least the substantially horizontally disposed member for shielding at least a second portion (or bottom portion) of such air bag actuator from the detrimental extraneous foreign material and for providing added strength between the first substantially vertically disposed member and the substantially horizontally disposed member.

Re: claim 3. Chalmers shows in figure 1 wherein the actuating member further includes a second plate like member the other of element 16 or 18 connected to the upper surface of the substantially horizontally disposed member and to the first planar surface of the first substantially vertically disposed plate like member adjacent a second side edge thereof and extending substantially perpendicular to at least the substantially horizontally disposed member for shielding at least a third portion of such air bag actuator from the detrimental extraneous foreign material and for providing added strength between the first substantially vertically disposed member and the substantially horizontally disposed member.

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Re: claim 4. In an alternate interpretation the first substantially vertically disposed plate like member can be element 16 which includes at least one mounting aperture shown in the area of element 22.

Re: claims 5 and 8. The means connected to the opposed second surface of the first vertical plate like member includes in an alternate interpretation at least one plate member 18 and a pin member 32 disposed in the aperture.

Re: claim 6. Chalmers shows in figure 1 an apparatus for mounting an air bag actuator to at least one brake beam, the air bag actuator having at least one inflatable air bag spring 12, the apparatus comprising: a first substantially vertically disposed plate like member 10 having a planar surface portion for engagement with a substantially planar surface portion of a second substantially vertically disposed plate like member 14 connected to such air bag actuator, the first substantially vertically disposed plate like member exposing at least a first portion of an exterior surface of such at least one inflatable air bag spring to an atmospheric operating environment characterized by a presence of detrimental extraneous foreign when such railway car mounted brake assembly is in use, a guide means 32 directly connected to and disposed closely adjacent a first outer edge of and substantially perpendicular to the planar surface portion of the first substantially vertically disposed plate like member for guiding and alignment during reciprocal motion of such air bag actuator and a securing means 52 connected to the first substantially vertically disposed plate like member for enabling attachment of the apparatus to a rigid structure.

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Re: claim 7. Chalmers shows in figure 1 a second guide means 50 directly connected to and disposed closely adjacent a second outer edge of and substantially perpendicular to the planar surface of the first sub vertically disposed plate like member for guiding and alignment.

Re: claim 9. Chalmers shows in figure 1 an air spring actuator assembly, the air spring actuator assembly comprising: at least one air bag spring 12 having at least a first portion of an exterior surface exposed to an atmospheric operating environment characterized by a presence of detrimental extraneous foreign material during use of the air spring actuator assembly, a first substantially vertically disposed plate like member 10, the first substantially vertically disposed plate like member having a first substantially planar surface engageable with a first surface of a second substantially vertically disposed plate like member 14 attached to the at last one air bag spring, a substantially horizontally disposed plate like member 50 connected to the first substantially vertically disposed plate like member adjacent a bottom edge thereof and extending substantially perpendicular to the first substantially planar surface of the first substantially vertically disposed plate like member for shielding the at least said first portion of the exterior surface of the at least one air bag spring from the detrimental extraneous foreign material, a means or aperture within 10 surrounding element 32 connected to a radially opposed second surface of the first substantially vertically disposed plate like member to a control linkage 32 of a railway vehicle brake assembly, a third substantially vertically disposed plate like member 18 having a second planar surface portion for engagement with a substantially planar surface portion of a fourth

substantially vertically disposed plate like member 16 connected to the at least one air bag spring, a guide means 36 connected to and disposed closely adjacent a first outer edge of and substantially perpendicular to at least one of the first substantially planar surface and the second planar surface portion of a respective one of the first and the third substantially vertically disposed plate like member for guiding and alignment during reciprocal motion of the air bag spring and a securing means connected to the third substantially vertically disposed plate like member for enabling attachment of the air spring actuator assembly to a rigid structure.

Re: claim 13. Chalmers shows in figure 1 the air inlet shown in the area of elements 22 and 24.

### Claim Rejections - 35 USC § 103

- 7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
  - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 8. Claims 1, 2, 5, 6, 9, 11, 12, 13, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 4711464 to Bilas in view of US Patent 6142480 to Streitman et al.

Bilas is silent with regards to the operating environment being characterized by a presence of detrimental extraneous foreign material.

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Streitman et al. teach in col. 1 the use of a railway vehicle brake being in the environment characterized by a presence of detrimental extraneous foreign material.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included a surrounding environment characterized by detrimental extraneous foreign material, as taught by Streitman et al., since it is old and well-known in the art that vehicles produce emissions that are byproducts of the generated power for the vehicle.

9. Claims 1-9 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 2879077 to Chalmers in view of Streitman.

Chalmers is silent with regards to the operating environment being characterized by a presence of detrimental extraneous foreign material.

Streitman et al. teach in col. 1 the use of a railway vehicle brake being in the environment characterized by a presence of detrimental extraneous foreign material.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included a surrounding environment characterized by detrimental extraneous foreign material, as taught by Streitman et al., since it is old and well-known in the art that vehicles produce emissions that are byproducts of the generated power for the vehicle.

10. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bilas in view of Streitman et al. as applied to claim 9 above, and further in view of US Patent 4846785 to Cassou et al.

Bilas, as modified, describes the invention substantially as set forth above, but

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does not include the limitation of a visual travel indicator.

Cassou et al. teach in col. 4 lines 2-5 the limitation of an actuator including a visual travel indicator or markings 20.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the portion of element 23 of Bilas, as modified, extending outside element 25 to have included a visual travel indicator, as taught by Cassou et al., in order to provide a means of monitoring linear travel of element 23 to monitor the amount of brake actuation for brake control purposes.

11. Claims 19, 20, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted prior art recited above the "improvement" phrase in claim 19 in view of Bilas.

The admitted prior art recites the railway environment, but the admitted prior art is silent as to the specific detail of the air spring actuator.

Bilas teaches in figure 1 an air spring actuator 10 comprising: a first substantially vertically disposed plate like member or right element 14 having a first substantially planar surface and a means 15 connected to the first substantially vertically disposed plate like member for securing the air spring actuator to such second control linkage, a second substantially vertically disposed plate like member or right element 27 having a second substantially planar surface and a means 23 connected to the second substantially vertically disposed plate like member for securing the air spring actuator to one of the brake beam, such second force transmitting member and a combination thereof, and at least one inflatable air bag spring 19 having a pair of substantially

vertically disposed planar surfaces (left side of element 14 and left side of element 27) for engagement with and attachment to the first substantially planar surface of the first substantially vertically disposed plate like member and the second substantially planar surface of the second substantially vertically disposed plate like member whereby selective inflation and deflation of the at least one inflatable air bag spring in a longitudinal direction enables a reciprocal motion thereof to move such control linkages and such force transmitting members for actuating and deactuating such brake beams wherein an exterior surface of the at least one inflatable air bag spring is at least partially exposed within such brake assembly to an atmosphere when such brake assembly is in use by virtue of the apertures 17 and 18.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the air spring actuator of the admitted prior art to have included an air spring actuator, as taught by Bilas, in order to provide a means of relieving excessive pressure conditions by continuously exposing the area of the actuator above element 13 to the environment. With regards to claims 20 and 21, see element 13 as the means for shielding and guiding and aligning.

12. Claims 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted prior art in view of US Patent 4711464 to Bilas and further in view of US Patent 6142480 to Streitman et al.

Admitted prior art, as modified, is silent with regards to the operating environment being characterized by a presence of detrimental extraneous foreign material.

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Streitman et al. teach in col. 1 the use of a railway vehicle brake being in the environment characterized by a presence of detrimental extraneous foreign material.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included a surrounding environment characterized by detrimental extraneous foreign material, as taught by Streitman et al., since it is old and well-known in the art that vehicles produce emissions that are byproducts of the generated power for the vehicle.

13. Claims 19, 20, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted prior art recited above the "improvement" phrase in claim 19 in view of Chalmers.

The admitted prior art recites the railway environment, but the admitted prior art is silent as to the specific detail of the air spring actuator.

Chalmers teaches in figure 1 an air spring actuator comprising: a first substantially vertically disposed plate like member or right element 10 having a first substantially planar surface and a means 52 connected to the first substantially vertically disposed plate like member for securing the air spring actuator to such second control linkage, a second substantially vertically disposed plate like member or right element 14 having a second substantially planar surface and a means 50 connected to the second substantially vertically disposed plate like member for securing the air spring actuator to one of the brake beam, such second force transmitting member and a combination thereof, and at least one inflatable air bag spring 12 having a pair of substantially vertically disposed planar surfaces 16 and 18 for engagement with and

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attachment to the first substantially planar surface of the first substantially vertically disposed plate like member and the second substantially planar surface of the second substantially vertically disposed plate like member whereby selective inflation and deflation of the at least one inflatable air bag spring in a longitudinal direction enables a reciprocal motion thereof to move such control linkages and such force transmitting members for actuating and deactuating such brake beams wherein an exterior surface of the at least one inflatable air bag spring is at least partially exposed within such brake assembly to an atmosphere when such brake assembly is in use as shown.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the air spring actuator of the admitted prior art to have included an air spring actuator, as taught by Chalmers, in order to provide a means of exposing the actuator to reduce assembly weight. With regards to claims 20 and 21, see element 32 as the means for shielding and guiding and aligning.

14. Claims 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted prior art in view of Chalmers and further in view of US Patent 6142480 to Streitman et al.

Admitted prior art, as modified, is silent with regards to the operating environment being characterized by a presence of detrimental extraneous foreign material.

Streitman et al. teach in col. 1 the use of a railway vehicle brake being in the environment characterized by a presence of detrimental extraneous foreign material.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included a surrounding environment characterized by

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detrimental extraneous foreign material, as taught by Streitman et al., since it is old and well-known in the art that vehicles produce emissions that are byproducts of the generated power for the vehicle.

#### Allowable Subject Matter

15. Claim 10 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. See the drawing objections with respect to claim 10.

#### Response to Arguments

16. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

#### Conclusion

17. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

18. Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Melody M. Burch whose telephone number is 571-272-

7114. The examiner can normally be reached on Monday-Friday (6:30 AM-3:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James McClellan can be reached on 571-272-6786. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.